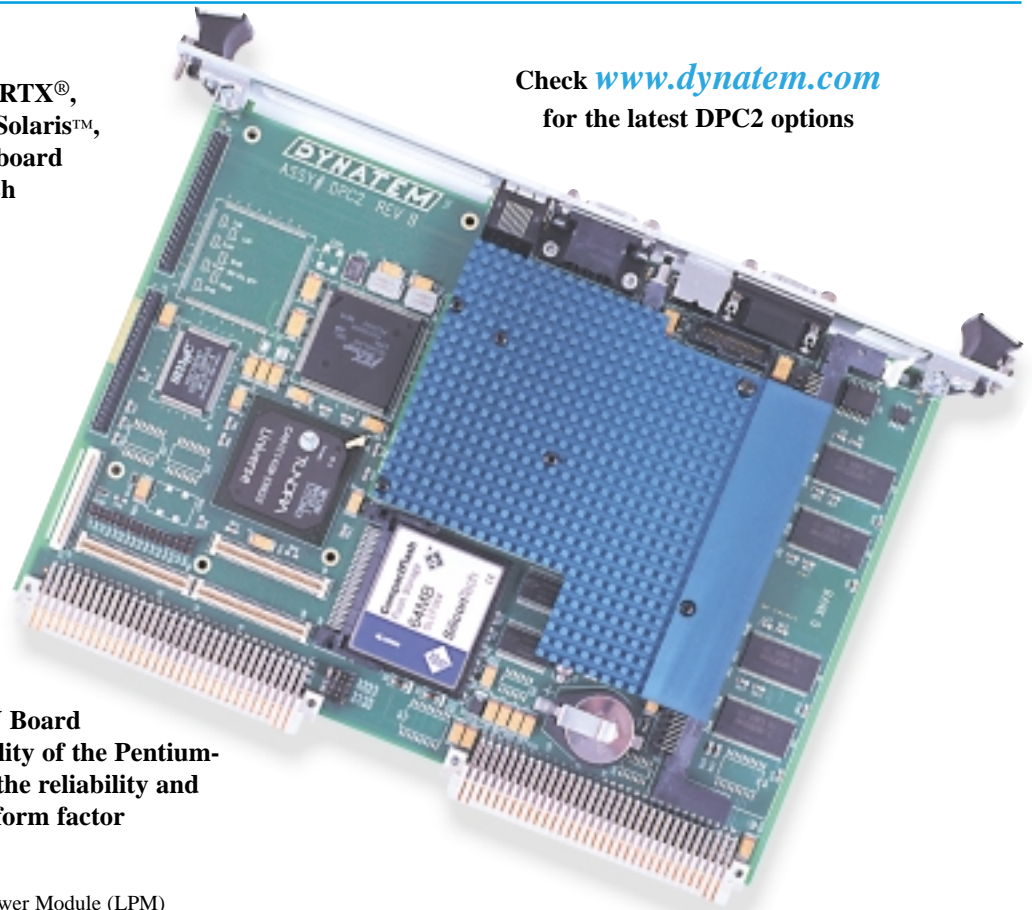




DPC2: Rugged Pentium® III VME Single Board Computer

Run NT®, NTE®, RTX®,
VxWorks®, QNX®, Solaris™,
Linux® from on-board
CompactFlash

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for the latest DPC2 options



DPC2

6U single-slot VMEbus CPU Board offers the power and versatility of the Pentium-based PC architecture with the reliability and ruggedness of the VMEbus form factor

Processor

- Intel's cool running EMC-2 Low Power Module (LPM)
- Supports a Pentium III processor and 256 kB on-die L2 cache as well as PCI, AGP, and DRAM interfaces

Single-slot Operation

- Single-slot VMEbus operation with on-board CompactFlash disk for bootable mass storage

Chipset

- High-performance Intel BX chipset (Northbridge is on EMC-2)
- Chipset includes DRAM controller, PCI bus arbitration logic and interface, AGP graphics interface, high-performance PCI, IDE interface, RTC, NV-RAM, standard PC timers, Ultra DMA, and interrupt logic

DRAM

- Includes 128 MB of surface-mount SDRAM
- DIMM module for additional 3.3 V PC100 SDRAM of up to 256 MB
- Maximum 384 MB total SDRAM

Additional Memory

- 2 MB of SRAM, which can be accessed from the VMEbus or the on-board Pentium III without byte-swapping or bus contention issues
- Optional 8 MB flash ROM for faster booting of RTOS

VMEbus

- Tundra Universe IIB PCI-VMEbus interface provides 64-bit VMEbus transfer rates over 30 MB/sec
- FIFOs permit write-posting to maximize available PCI and VMEbus bandwidth

- Full Slot 1 (system controller) functions provided
- Lower cost versions available without VMEbus

VGA

- Asilant's 69030 AGP compatible graphics controller
- 4 MB of SDRAM is built into the chip

SCSI (optional)

- Symbios' 53C875 Ultra SCSI controller with transfer rates to 40 B/sec

LAN

- Intel 82559 single chip Ethernet controller
- 10BaseT/100BaseTX support, full duplex

IDE

- Primary Ultra DMA IDE interface with improved transfer rates
- PIO and bus master support
- Secondary IDE port for CompactFlash on-board booting for flash-based and mechanical storage

Floppy

- Floppy drive controller, with support for drives up to 2.88 MB

Serial I/O

- COM1 and COM2 serial ports, based on 16C550 type UARTs with 16-byte transmit and receive FIFOs
- Each port can be configured for RS-232 or RS-422/485 independently

Parallel I/O

- LPT1 parallel port, capable of bidirectional, enhanced parallel port (EPP), and enhanced capabilities port (ECP), per IEEE 1284

BIOS

- General Software's flash-based system BIOS, upgradeable via floppy
- Customized versions can be provided

Watchdog

- Programmable watchdog timer for system recovery

PMC Expansion

- One PMC expansion slot available on DPC2
- Optional three-PMC carrier supports three PMC cards in two-slot configuration with the DPC2 (three-slot configuration with Transition Module)
- Dynatem offers a broad range of PMC modules including communication boards, graphics, imaging, DSP and I/O

I/O Interfaces

- COM1, keyboard/mouse, VGA, 10BaseT/100BaseTX, and PMC, all accessible through front panel
- SCSI, COM2, LPT1, PMC I/O, and, optionally, IDE and FDC, routed to the P2 connector (PMC I/O and FDC are on rows d & z)

P2 Breakout Board

- Rear plug-in module
- Routes all P2 I/O to standard connectors
- DB-9 connector for COM2, DB-25 connector for LPT1, Ultra-SCSI connector, and floppy drive and IDE connectors
- 64-pin DIN connector for PMC I/O
- Flat-ribbon headers also available for all I/O
- Enables interface of all I/O in a single VME slot

Transition Module

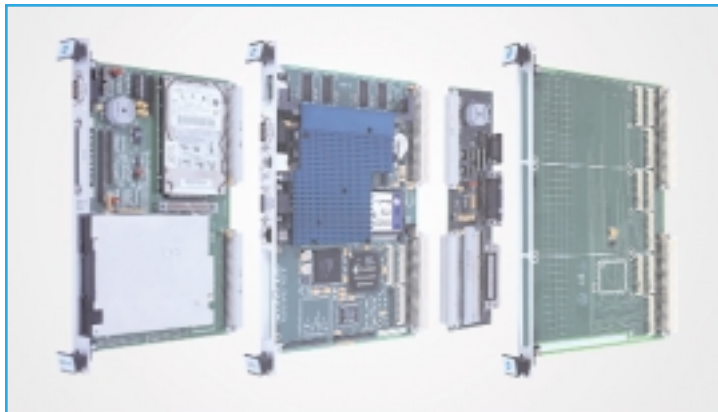
- Requires one additional slot for a two-slot configuration with the DPC2, including floppy or CD-ROM drive and hard drives
- Includes front panel SCSI and COM2 connectors

Rugged/Extended Temperature

- Special thermal design allows extended temperature operation
- Tested to -40°/+85°C operation
- Use of surface-mount SDRAMs and no socketed components allows high shock/vibration immunity

Power Requirements

- +5 VDC @ 4.4 A typ.
- +3 VDC Lithium Coin Cell @ 2.4 mA



DPC2 and support hardware pictured at left (from the left): XPC2TBF8, DPC2, XPC2PTBN, XPMC3

XPC2TBF8 and/or XPMC3 can be attached to the DPC2 using double-wide or triple-wide front panels.

The support hardware shown is compatible with earlier Dynatem Pentium- and Pentium II-based products, the DPC1 and DRC1.

Ordering Information:

| PART# | DESCRIPTION |
|--|--|
| XPC2xxMKx | Pentium III CPU board with 500 MHz Pentium III, 10/100BaseTX, SVGA video, 2 COM ports, PMC expansion slot, KB, mouse, bi-directional parallel I/O, single-slot, w/ 128 MB of surface mount SDRAM and 2 MB shared SRAM. Supports CompactFlash. With BIOS installed. Without VMEbus installed. Without SCSI installed. |
| xPC2Jxxx | 64 MB flash ROM for DPC2 |
| xPC2Oxxx | 192 MB flash ROM for DPC2 |
| xPC2Oxxx | 256 MB flash ROM for DPC2 |
| (CompactFlash can be special ordered in versions up to 1.456 GB) | |
| xPC2xFxx | Optional 8 MB boot flash (for booting RTOS) |
| xPC2xxNx | Upgrade to 256 MB (128 MB DIMM module) |
| xPC2xxOx | Upgrade to 384 MB (256 MB DIMM module) |
| xPC2xxxS | With fast/wide SCSI-2 |
| xPC2xxxI | No SCSI-2, with IDE and floppy routed to P2 |
| DPC2xxxx | With VMEbus |

Support Hardware:

| PART# | DESCRIPTION |
|-----------|---|
| XPC2TBxx | Transition board which provides SCSI-2 connector and COM2 connector (DB-9) on front panel. Other interfaces include LPT1 connector (26-pin dual-row ribbon cable connector), flat panel interface (60-pin dual row header). A standard PC speaker is also included. 40-pin IDE connector also provided. |
| XPC2TBFx | With 1.44 MB floppy drive on transition board |
| XPC2TBCx | With CD-ROM drive in place of floppy drive |
| XPC2TBx20 | With 20 GB IDE hard disk drive on transition board |
| XPC2PTBN | Rear plug-in peripheral transition board with connectors for Ultra SCSI, COM2, and LPT1. The DPC2 allows routing of IDE to SCSI connector (when SCSI option not used) |
| XPC2PTB | Rear plug-in peripheral transition board for DRC1 with VME64 connector for FDC or PMC I/O. |
| XPMC3 | Carrier for 3 PMC cards (requires second slot) |